

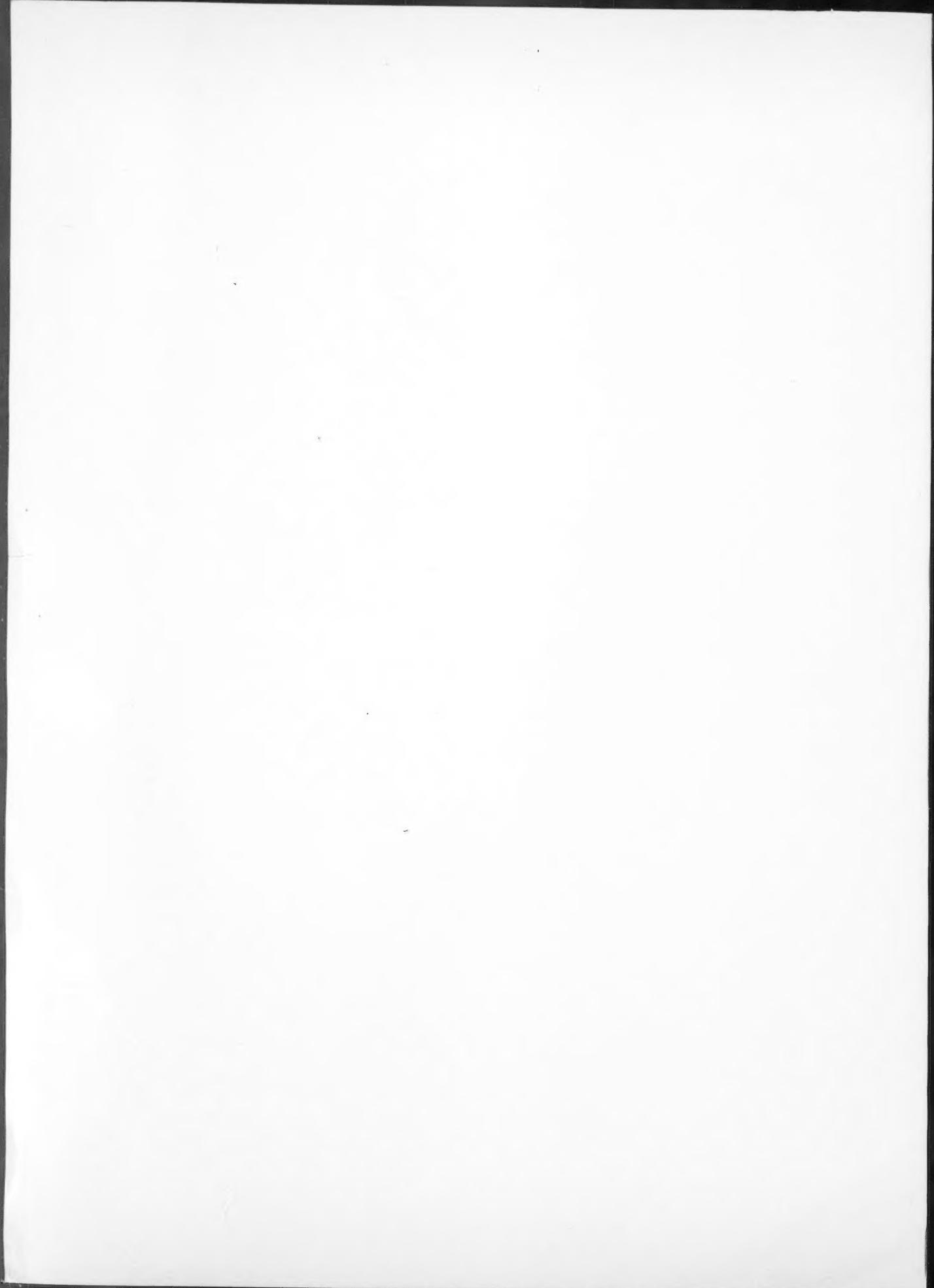


Canadian Aeronautics and Space Journal

**VOLUME 12
1966**

Published by the

CANADIAN AERONAUTICS AND SPACE INSTITUTE
Commonwealth Building, 77 Metcalfe Street
OTTAWA



CANADIAN AERONAUTICS AND SPACE JOURNAL

Index to Volume 12

No. 1 January: p 1-44
 No. 2 February: p 45-88
 No. 3 March: p 89-128
 No. 4 April: p 129-164
 No. 5 May: p 165-208

No. 6 June: p 209-262
 No. 7 September: p 263-318
 No. 8 October: p 319-358
 No. 9 November: p 359-402
 No. 10 December: p 403-450

| PAGE | PAGE |
|--|------|
| A | |
| Accident Investigation, A Fire Problem in Aircraft: G. Williams-Leir | 7 |
| Aircraft Cabins and Flight Suits, Pressurization Systems: L. K. Hoff | 17 |
| Aircraft Development Programs: Lessons from History, Military/Contractor Relationships in: W. H. Casley | 129 |
| Airline Navigation Requirements: P. G. Powell | 331 |
| Airport Pavement Roughness and Aircraft Response Affecting Pavement Design and Construction: G. Y. Sebastian and J. Demellweek | 165 |
| Airworthiness Codes as Applicable to Supersonic Transports: R. J. Fenner | 211 |
| Anderson, S. B., H. C. Quigley and R. C. Innis: Stability and Control Considerations for STOL Aircraft | 177 |
| Approximate Method of Computing the Attitude of Sounding Rockets, An: F. V. Cairns and K. A. Steele | 377 |
| B | |
| Book Reviews: | |
| Aerospace Ordnance Handbook: F. B. Pollard and J. H. Arnold | 395 |
| Astronautics Year—An International Astronautical and Military Space/Missile Review of 1964: D. Howard | 199 |
| Astrophysics and Space Science: A. J. McMahon | 347 |
| Atmospheric Reentry: J. J. Martin | 350 |
| Atomic and Space Physics: A. E. S. Green and P. J. Wyatt | 347 |
| Boiling Heat Transfer and Two-Phase Flow: L. S. Tong | 199 |
| Complete Russian Course for Scientists: M. Beresford | 349 |
| Cooling Electronic Equipment: A. D. Kraus . . | 155 |
| Current Aspects of Exobiology: G. Mamikunian and M. Briggs | 396 |
| Design and Structures of Least Weight, The: H. L. Cox | 155 |
| Digital Communications: S. W. Golomb | 286 |
| Digital Logic Laboratory Workbook: B. W. Stephenson | 32 |
| Foundations of Solid Mechanics: Y. C. Fung | 30 |
| From the Ground Up: S. A. F. MacDonald | 198 |
| Fundamental Phenomena in Hypersonic Flow: J. G. Hall | 439 |
| Handbook of Analytical Design for Wear: C. W. MacGregor | 198 |
| High-Speed Wind Tunnel Testing: A. Pope and K. L. Goin | 286 |
| Interactions of Space Vehicles with an Ionized Atmosphere: S. F. Singer | 287 |
| Introduction to Physical Gas Dynamics: W. G. Vincenti and C. H. Kruger, Jr. | 439 |
| Introduction to Space Science: W. N. Hess | 348 |
| Laminated Plastics: D. J. Duffin | 349 |
| Open the Sky: E. M. Quittenden | 32 |
| Pilotage des Missiles et des Véhicules Spatiaux: H. Lazennec | 288 |
| Politics and the Airlines: D. Corbett | 348 |
| Preparing for the Professional Engineer's Examination: I. J. Levinson | 82 |
| Principles of Dynamics: D. T. Greenwood | 30 |
| Problems in Strength of Materials: N. M. Belyayev | 347 |
| Progress in Aeronautical Sciences Volume 6: D. Kuchemann and L. H. G. Sterne | 440 |
| Radiative Contributions to Energy and Momentum Transport in a Gas: D. H. Sampson | 288 |
| Railroad and the Space Program, The. An Exploration in Historical Analogy: B. Mazlish | 197 |
| Royal Flying Corps, A History, The: G. Norris | 31 |
| Scientific Experiments for Manned Orbital Flight, Vol. 4: P. C. Badgley | 350 |
| Space Communications Systems: R. F. Filipowsky and E. I. Muehldorf | 156 |
| Space Communications Techniques: R. F. Filipowsky and E. I. Muehldorf | 288 |
| Strength and Deformation in Nonuniform Temperature Fields: Ya. B. Fridman | 197 |
| Supersonic Flight: B. Clarke | 288 |
| Technical Data Requirements for Systems Engineering and Support: T. F. Walton | 82 |
| Telecommunication Satellites: K. W. Gatland | 198 |
| Thermal Stress Analyses: D. J. Johns | 155 |
| Unmanned Exploration of the Solar System: G. W. Morganthaler and R. G. Morra | 395 |
| U.S. Air Force: A Pictorial History, The: J. J. Hagerty and W. R. Smith | 286 |
| World's First Aeroplane Flights 1903-1908, The: C. H. Gibbs-Smith | 31 |

| PAGE | PAGE |
|--|--|
| C | |
| Cairns, F. V., and K. A. Steele: An Approximate Method of Computing the Attitude of Sounding Rockets | 377 |
| Canadian Aerospace Abstracts | 33, 79, 113, 251, 283, 393 |
| CASI Log | 37, 83, 119, 157, 201, 255, 293, 353, 397, 441 |
| Caseley, W. H.: Military/Contractor Relationships in Aircraft Development Programs: Lessons from History | 129 |
| Charlton, P.: The CHSS-2 Haul Down and Handling System | 63 |
| CHSS-2 Haul Down and Handling System, The: P. Charlton | 63 |
| Commercial Helicopter Pilots in Canada—A Labour Market Study: D. Harrison | 237 |
| Compressor Inflow, An Experimental Investigation of Inclined: R. A. Tyler and R. G. Williamson | 45 |
| Computing the Attitude of Sounding Rockets, An Approximate Method of: F. V. Cairns and K. A. Steele | 377 |
| Concorde Realities: B. S. Shenstone | 320 |
| Control Considerations for STOL Aircraft, Stability and: S. B. Anderson, H. C. Quigley and R. C. Innis | 177 |
| Cook, D. L.: Propeller Control at Low Airspeed | 11 |
| Crabbe, R. S., D. J. Peake, R. F. Meyer and W. J. Rainbird: Some Examples of Separation in Three Dimensional Flows | 409 |
| D | |
| Demellweek, J., and G. Y. Sebastian: Airport Pavement Roughness and Aircraft Response Affecting Pavement Design and Construction | 165 |
| Development of Large Bore Gun Launched Rockets, The: F. W. Eyre | 143 |
| E | |
| Editorial: | |
| President's Message, The: F. C. Phillips | 209 |
| Experimental Investigation of Inclined Compressor Inflow, An: R. A. Tyler and R. G. Williamson | 45 |
| Experimental Investigation of the Flow Field About a Subsonic Jet Exhausting into a Quiescent and a Low Velocity Air Stream: G. H. Gelb and W. A. Martin | 333 |
| Eyre, F. W.: The Development of Large Bore Gun Launched Rockets | 143 |
| F | |
| F-4 BLC—From Research to Reality: | |
| S. K. Landgraf | 105 |
| Fenner, R. J.: Airworthiness Codes as Applicable to Supersonic Transports | 211 |
| Fire Problem in Aircraft Accident Investigation, A: G. Williams-Leir | 7 |
| Flemming, D. P.: A Numerical Method for Calculating the Flow Behind a Given Detached Shock Wave | 69 |
| Flight Research Use of VTOL Variable Stability Airplanes, VTOL Flying Qualities and the: J. M. Schuler, J. Kroll, Jr., and D. L. Key | 223 |
| Flight Suits, Pressurization Systems—Aircraft Cabins and: L. K. Hoff | 17 |
| G | |
| Flow Behind a Given Detached Shock Wave, A Numerical Method for Calculating the: D. P. Flemming | 69 |
| Flow Field About a Subsonic Jet Into a Quiescent and a Low Velocity Air Stream, An Experimental Investigation of the: G. H. Gelb and W. A. Martin | 333 |
| Future Short Haul Air Transportation in the Northeast Corridor of the USA: R. W. Simpson | 383 |
| H | |
| Handling Qualities Research in the Development of a STOL Utility Transport Aircraft: T. R. Nettleton | 93 |
| Harrison, D.: Commercial Helicopter Pilots in Canada—A Labour Market Study | 237 |
| Haul Down and Handling System, The CHSS-2: P. Charlton | 63 |
| Heikkila, W. J.: Practical Problems Encountered in Rocket Studies of Geophysical Disturbances | 433 |
| Helicopter Pilots in Canada—A Labour Market Study, Commercial: D. Harrison | 237 |
| Hoff, L. K.: Pressurization Systems—Aircraft Cabins and Flight Suits | 17 |
| Hypersonic Source Flow About Some Particular Sharp Nosed Slender Bodies, The: R. F. Meyer | 189 |
| I | |
| Imster, H. F., and E. L. Salyers: Some of the Thermal and Fluid Mechanics Problems Encountered During the Development of the Gemini Spacecraft | 137 |
| Innis, R. C., S. B. Anderson and H. C. Quigley: Stability and Control Considerations for STOL Aircraft | 177 |
| ISIS 'A' Satellite Particle-Counting Experiment, Sixteen-Channel Silicon Integrated-Circuit Encoder for the: T. H. Sheptyczi | 403 |
| ISIS 'A' Spacecraft, Thermal Design of the: G. G. Gray and L. S. Jurewicz | 425 |
| J | |
| Jurewicz, L. S., and G. G. Gray: Thermal Design of the ISIS 'A' Spacecraft | 425 |

| PAGE | PAGE |
|--|--------------|
| K | |
| Key, D. L., J. M. Schuler and J. Kroll, Jr.: VTOL Flying Qualities and the Flight Research Use of VTOL Variable Stability Airplanes | 223 |
| Kroll, Jr., J., D. L. Key and J. M. Schuler: VTOL Flying Qualities and the Flight Research Use of VTOL Variable Stability Airplanes | 223 |
| L | |
| Landgraf, S. K.: F-4 BLC—From Research to Reality | 105 |
| Landing Gear and with Requirements for Semi-Improved Airfield Operations, Ground Loads for Aircraft with Multiple Wheels and Multiple: D. M. Rehder and L. B. Mosby | 359 |
| Lau, J.: Supersonic Magnetohydrodynamic Flow Around a Right Angle Bend | 249 |
| Lau, J.: Recalculation of Incompressible Flow in Two-Dimensional Bends | 280 |
| Lewis, R. M.: A Tube Transportation System Compared with Air Transportation | 343 |
| Li, J. S., and J. H. T. Wade: The Characteristics of a Plasma Generator with a Transpiration-Cooled Porous Electrode and Related Heat Transfer Studies | 273 |
| Lindsay, A. E., and J. K. Pulfer: Phase-Lock Frequency Stabilization of Rocket Telemetry Transmitters by Means of Silicon Integrated Circuits | 269 |
| M | |
| Makomaski, A. H.: Some Effects of Surface Roughness on Two-Dimensional Mach Reflection of Moving Plane Shock Waves in Air | 109 |
| Martin, W. A., and G. H. Gelb: An Experimental Investigation of the Flow Field About a Subsonic Jet Exhausting into a Quiescent and a Low Velocity Air Stream | 333 |
| Meyer, R. F.: The Hypersonic Source Flow About Some Particular Sharp Nosed Slender Bodies | 189 |
| Meyer, R. F., W. J. Rainbird, R. S. Crabbe and D. J. Peake: Some Examples of Separation in Three Dimensional Flows | 409 |
| Military/Contractor Relationships in Aircraft Development Programs: Lessons from History: W. H. Casley | 129 |
| Mosby, L. B., and D. M. Rehder: Ground Loads for Aircraft with Multiple Wheels and Multiple Landing Gear and with Requirements for Semi-Improved Airfield Operations | 359 |
| N | |
| Navigation Requirements, Airline: P. G. Powell | 331 |
| Nettleton, T. R.: Handling Qualities Research in the Development of a STOL Utility Transport Aircraft | 93 |
| Noise-Generation Mechanisms: H. S. Ribner | 1 |
| North, H. E. T.: The Earned Budget—A Cost and Time Reference for Gauging Progress on Engineering Projects | 29 |
| Notices to Aircraft Maintenance Engineers and Aircraft Owners | 35, 115, 289 |
| Numerical Method for Calculating the Flow Behind a Given Detached Shock Wave, A: D. P. Flemming | 69 |
| P | |
| Pavement Design and Construction, Airport Pavement Roughness and Aircraft Response Affecting: G. Y. Seabastyan and J. Demellweek | 165 |
| Peake, D. J., R. F. Meyer, W. J. Rainbird and R. S. Crabbe: Some Examples of Separation in Three Dimensional Flows | 409 |
| Phase-Lock Frequency Stabilization of Rocket Telemetry Transmitters by Means of Silicon Integrated Circuits: J. K. Pulfer and A. E. Lindsay | 269 |
| Place of Technology in the Scheme of Things, The: K. F. Tupper | 89 |
| Powell, P. G.: Airline Navigation Requirements | 331 |
| Practical Problems Encountered in Rocket Studies of Geophysical Disturbances: W. J. Heikkila | 433 |
| Pressurization Systems—Aircraft Cabins and Flight Suits: L. K. Hoff | 17 |
| Propeller Control at Low Airspeed: D. L. Cook | 11 |
| Pulfer, J. K., and A. E. Lindsay: Phase-Lock Frequency Stabilization of Rocket Telemetry Transmitters by Means of Silicon Integrated Circuits | 269 |
| Q | |
| Quigley, H. E., R. C. Innis and S. B. Anderson: Stability and Control Considerations for STOL Aircraft | 177 |
| R | |
| Rainbird, W. J., R. S. Crabbe, D. J. Peake and R. F. Meyer: Some Examples of Separation in Three Dimensional Flows | 409 |
| Rehder, D. M., and L. B. Mosby: Ground Loads for Aircraft with Multiple Wheels and Multiple Landing Gear and with Requirements for Semi-Improved Airfield Operations | 359 |
| Ribner, H. S.: Noise-Generation Mechanisms | 1 |
| Rocket Apogee Computation from Flight Duration, Some Results of: K. A. Steele | 151 |
| Rocket Studies of Geophysical Disturbances, Practical Problems Encountered in: W. J. Heikkila | 433 |
| Rocket Telemetry Transmitters by Means of Silicon Integrated Circuits, Phase-Lock Frequency Stabilization of: J. K. Pulfer and A. E. Lindsay | 269 |
| Rockets, The Development of Large Bore Gun Launched: F. W. Eyre | 143 |
| Rowe, N. E.: Aviation Safety | 438 |
| S | |
| Salyers, E. L., and H. F. Imster: Some of the Thermal and Fluid Mechanics Problems Encountered During the Development of the Gemini Spacecraft | 137 |
| Schuler, J. M., J. Kroll, Jr., and D. L. Key: VTOL Flying Qualities and the Flight Research Use of VTOL Variable Stability Airplanes | 223 |
| Seabastyan, G. Y., and J. Demellweek: Airport Pavement Roughness and Aircraft Response Affecting Pavement Design and Construction | 165 |
| Separation in Three Dimensional Flows, Some Examples of: W. J. Rainbird, R. S. Crabbe, D. J. Peake and R. F. Meyer | 409 |
| Shenstone, B. S.: Concorde Realities | 320 |

| PAGE | | PAGE | |
|--|-----|--|-----|
| Shepertycki, T. H.: Sixteen-Channel Silicon Integrated-Circuit Encoder for the ISIS 'A' Satellite Particle-Counting Experiment | 403 | Surface Roughness on Two-Dimensional Mach Reflection of Moving Plane Shock Waves in Air, Some Effects of: A. H. Makomaski | 109 |
| Short Haul Air Transportation in the Northeast Corridor of the USA, Future: R. W. Simpson | 383 | T | |
| Short-Haul Transportation, Trends in: H. A. C. Summers | 263 | Technical Forum: | |
| Simpson, R. W.: Future Short Haul Air Transportation in the Northeast Corridor of the USA | 383 | Aviation Safety: N. E. Rowe | 438 |
| Sixteen-Channel Silicon Integrated-Circuit Encoder for the ISIS 'A' Satellite Particle-Counting Experiment: T. H. Shepertycki | 403 | Characteristics of a Plasma Generator with a Transpiration-Cooled Porous Electrode and Related Heat Transfer Studies, The: J. S. Li and J. H. T. Wade | 273 |
| Some Effects of Surface Roughness on Two-Dimensional Mach Reflection of Moving Plane Shock Waves in Air: A. H. Makomaski | 109 | Earned Budget—A Cost and Time Reference for Gauging Progress on Engineering Projects, The: H. E. T. North | 29 |
| Some Examples of Separation in Three Dimensional Flows: W. J. Rainbird, R. S. Crabbe, D. J. Peake and R. F. Meyer | 409 | Recalculation of Incompressible Flow in Two-Dimensional Bends: J. Lau | 280 |
| Some of the Thermal and Fluid Mechanics Problems Encountered During the Development of the Gemini Spacecraft: H. F. Imster and E. L. Salyers | 137 | Supersonic Magnetohydrodynamic Flow Around a Right Angle Bend: J. Lau | 249 |
| Some Results of Rocket Apogee Computation from Flight Duration: K. A. Steele | 151 | Thermal Design of the ISIS 'A' Spacecraft: G. G. Gray and L. S. Jurewicz | 425 |
| Sounding Rockets, An Approximate Method of Computing the Attitude of: F. V. Cairns and K. A. Steele | 377 | Trends in Short-Haul Transportation: H. A. C. Summers | 263 |
| Stability and Control Considerations for STOL Aircraft: S. B. Anderson, H. C. Quigley and R. C. Innis | 177 | Tube Transportation System Compared with Air Transportation, A: R. M. Lewis | 343 |
| Steele, K. A.: Some Results of Rocket Apogee Computation from Flight Duration | 151 | Tupper, K. F.: The Place of Technology in the Scheme of Things | 89 |
| Steele, K. A., and F. V. Cairns: An Approximate Method of Computing the Attitude of Sounding Rockets | 377 | Tyler, R. A., and R. G. Williamson: An Experimental Investigation of Inclined Compressor Inflow | 45 |
| STOL Aircraft, Stability and Control Considerations for: S. B. Anderson, H. C. Quigley and R. C. Innis | 177 | V | |
| STOL Utility Transport Aircraft, Handling Qualities Research in the Development of a: T. R. Nettleton | 93 | VTOL Flying Qualities and the Flight Research Use of VTOL Variable Stability Airplanes: J. M. Schuler, J. Kroll, Jr., and D. L. Key | 223 |
| Summers, H. A. C.: Trends in Short-Haul Transportation | 263 | W | |
| Supersonic Transports, Airworthiness Codes as Applicable to: R. J. Fenner | 211 | Wade, J. H. T., and J. S. Li: The Characteristics of a Plasma Generator with a Transpiration-Cooled Porous Electrode and Related Heat Transfer Studies | 273 |
| | | Williams-Leir, G.: A Fire Problem in Aircraft Accident Investigation | 7 |
| | | Williamson, R. G., and R. A. Tyler: An Experimental Investigation of Inclined Compressor Inflow | 45 |

